

REMARKS

Summary of the Office Action

Claims 1, 2, 4-13 and 15-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Publication No. 63-306820 (hereinafter "JP '306820").

Claims 1, 2, 4-6, 9-13, 15 and 18-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Publication No. 2-100820 (hereinafter "JP '100820").

Claims 1-6, 9-11, 13, 15-17, 19 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by German Publication No. 33 07 555 (hereinafter "DE '555").

Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '306820.

Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '100820.

Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over DE '555.

Summary of the Response to the Office Action

Applicant has amended claims 1-4 and 8-10.

Applicant has canceled claims 6, 7 and 13 without prejudice or disclaimer.

Claims 1-5, 8-12, and 14-20 are pending.

All Claims Define Allowable Subject Matter

Claims 1, 2, 4-13 and 15-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP '306820. Claims 1, 2, 4-6, 9-13, 15 and 18-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP '100820. Claims 1-6, 9-11, 13, 15-17, 19 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by "DE '555. Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '306820. Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '100820. Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over DE '555. Applicant has canceled claims 6, 7 and 13 without prejudice or disclaimer, rendering the rejections of claims 6, 7 and 13 moot. Applicant respectfully traverses the rejections under 35 U.S.C. § 102(b), of claims 1-5, 8-12, and 15-20, and the rejections under 35 U.S.C. § 103(a), of claim 14. Applicant has amended claim 1 to particularly point out and distinctly claim an embodiment of Applicant's invention.

Claim 1 recites a threading tool including a threading part, a cooling channel, and a diversion element. The cooling channel extends inside of the threading part generally along a longitudinal axis to an outlet located in a front end surface of the threading part. The diversion element is arranged such that coolant flowing out of the cooling channel is diverted radially outwards at the diversion element. The diversion element is a disc secured to the end surface of the threaded tool. There is a passage on the end surface of the threaded tool between the cooling channel and at least one flute or oil groove.

Such a threaded tool is easy to manufacture, since a standard tool with a central channel can be used, and a disc can be welded onto the end surface of the threaded tool after a passage

between the central cooling channel and at least one flute or oil groove has been milled into the end surface of the standard threaded tool.

Furthermore, such a threaded tool can be used both for dead-hole threads as well as for through-hole threads since due to the special arrangement of the diversion element, a coolant emerges during use in an axial direction from the cooling channel and is diverted radially outwards at the diversion disc and reaches the flutes or oil grooves. Moreover, due to the disc shape of the diversion element, the tool can be used for dead-hole threads since a disc has a very small thickness, so that the threads can be cut to the bottom of the dead hole.

In contrast, JP '306820 does not disclose an diversion element shaped as a disc. JP '306820 discloses a kind of plug which is plugged into the central through-bore of the threaded tool. Therefore, there is also no passage between the central cooling channel and the flutes. Instead, a channel extending more or less radially outwards is formed within the plug. Such a construction disclosed in JP '306820 is not so easy to manufacture. Furthermore, such a structure cannot be used for dead-hole threads due to the relatively large thickness of the plug which contacts the bottom of the head-hole, preventing threads from being cut to the bottom of the dead-hole. JP '100820 is directed to tool similar to the tool disclosed in JP '306820.

DE '555 discloses a kind of cap, rather than a disc. Since there is also no passage between the central cooling channel and the flutes, it is necessary to provide the cap-shaped element with an edge element extending from the bottom of the cap in an axial direction in order to provide a gap for discharging the coolant.

Thus, Applicant respectfully submits that JP '306820, JP '100820 and DE '555 do not teach or suggest at least the features of a diversion element that is a disc secured to the end

surface of the threaded tool such that there is a passage on the end surface of the threaded tool between the cooling channel and at least one flute or oil groove, as recited in claim 1. Claims 2-5, 8-12, and 14-20 depend from claim 1 and recite the same combination of allowable features recited in claim 1, as well as additional features that define over the prior art. Accordingly, it is requested that the rejections under 35 U.S.C. § 102(b), of claims 2-5, 8-12, and 15-20, and the rejections under 35 U.S.C. § 103(a), of claim 14, be withdrawn.

CONCLUSION

In view of the foregoing, Applicant submits that the pending claims are in condition for allowance, and respectfully requests reconsideration and timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution. A favorable action is awaited.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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